US Army Corps of Engineers

Nashville District

Public Notice

Public Notice No. 06-01 Date: January 4, 2006

Application No. 2005-02625 Expiration Date: February 3, 2006

Please address all comments to:
Nashville District Corps of Engineers, Regulatory Branch
3701 Bell Road, Nashville, TN 37214 Attn: Lisa Morris

SUBJECT: Proposed Deposit of Fill Material for Channel Relocations Associated with Development of Commercial Property on a Tributary of Bushman Creek Mile 3.2, Rutherford County, TN

TO ALL CONCERNED: The application described below has been submitted for a Department of the Army (DA) Permit pursuant to **Section 404 of the Clean Water Act (CWA).** Before a permit can be issued, certification must be provided by the state of Tennessee, Division of Water Pollution Control, Department of Environment and Conservation, pursuant to Section 401(a)(1) of the CWA, that applicable water quality standards will not be violated.

APPLICANT: Kroger Company
1014 Vine Street
Cincinnati, OH 45202

LOCATION: Above Headwaters Tributary of Bushman Creek, Mile 3.2, at intersection of SR 96 and Rutherford Boulevard, Rutherford County, TN. Bushman Creek is a tributary of the East Fork Stones River Mile 14.6, Left Bank. (Lascassas USGS Map, lat 35.88727, lon 86.3535).

DESCRIPTION: The proposed work consists of the discharge of fill material into waters of the US in order to develop a property with a retail grocery outlet, out-parcels, access, and parking. As shown in Exhibit B, the applicant proposes to combine two channels, B – 1,205 linear feet (LF) and C - 245 LF, into a single channel at the western boundary of the property in an alignment that parallels SR 96. Channel A, which has been previously channelized, would not be altered. The created channel would be about 1,350 LF in length, of which 415 LF would be culverted. This proposal would result in 498 LF net losses in stream length. However, according to the applicant, considering the poor condition of the existing stream, the net result after creation of their proposed mitigation channel would be a stream that provides greater functional value than presently exists. With the application, the applicant provided a report of the alternatives studied, geotechnical information regarding the site, and a habitat assessment stating that little natural stream or riparian habitat remained along the grass-lined sloped trapezoidal ditches.

Proposed Mitigation Plan (Exhibits C through G): Exhibit C provides a typical cross-sectional view of the proposed mitigation channel. According to the application, this configuration would allow for safe passage of flood flows while establishing a base flow zone channel and riparian zone more typical of what historically existed. The proposed channel would be excavated by controlled blasting and/or rock hammer to achieve the desired dimensions to accommodate the floodway. The base flow channel would be created by mechanical excavation and configured to maintain a thalweg to carry the mean annual flow of 0.16 cfs and possess the hydraulic capacity to carry 0.5 cfs at bank-full conditions. A riparian zone would be created along a terrace incised into the floodways side slopes. Woody vegetation consisting of green ash, black willow, and willow oak would be planted a staggered thirty foot centers. The side slopes would be seeded with a mixture a switch grass and blue bluestem. **Exhibit D** shows the stream channel geometry in cross-sectional aspect at three locations along the proposed alignment. The channel as proposed would have a gradient of 0.4 to 0.5%.

Exhibits E through G illustrates typical construction methods for the habitat enhancement features. In an effort to create a riffle/run stream scenario, log drop structures would be installed at 100 foot intervals and boulder/cobble clusters placed randomly throughout the channel. After the proposed channel is created, the flow, if any present in the existing channel, would be diverted to the proposed channel and the original channel (B & C) filled with approximately **1,100 cubic yards** of clean fill material. Best Management Practices for soil erosion prevention would be employed at the site throughout the course of construction activities. The created channels hydrology and riparian buffer would be evaluated yearly for five (5) years with a report of findings and recommended corrective measures, if needed, submitted to the corps and TDEC. A survival rate of 70% for the riparian species is proposed. Plans of the proposed work are attached to this notice.

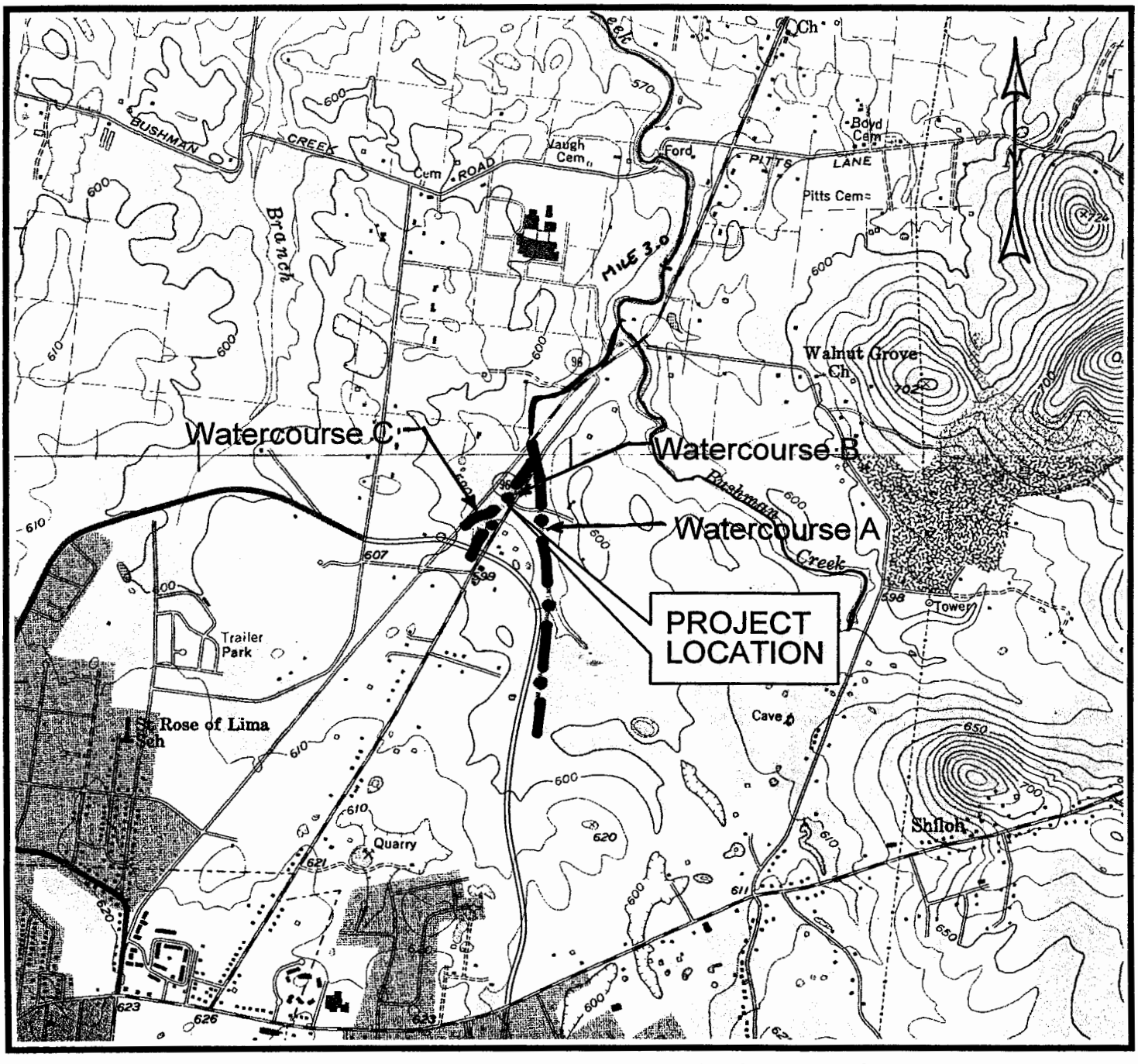
The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the work, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b)(1) of the CWA. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a hearing and to determine the overall public interest of the proposed activity. An Environmental Assessment will be prepared by this office prior to a final decision concerning issuance or denial of the requested DA Permit.

The National Register of Historic Places has been consulted and no properties listed in or eligible for the National Register are known which would be affected by the proposed work. This review constitutes the full extent of cultural resources investigations unless comment to this notice is received documenting that significant sites or properties exist which may be affected by this work, or that adequately documents that a potential exists for the location of significant sites or properties within the permit area. Copies of this notice are being sent to the office of the State Historic Preservation Officer.

Based on available information, the proposed work will not destroy or endanger any federally-listed threatened or endangered species or their critical habitats, as identified under the Endangered Species Act, and, therefore, initiation of formal consultation procedures with the U.S. Fish and Wildlife Service is not planned at this time. Other federal, state, and/or local approvals may be required for the proposed work. The state of Tennessee, Department of Environment and Conservation, must issue a water quality certification for the work in accordance with Section 401(a)(1) of the CWA.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Written statements received in this office on or before February 3, 2006, will become a part of the record and will be considered in the determination. Any response to this notice should be directed to the Regulatory Branch, Attention: Lisa R. Morris, at the above address, telephone (615) 369-7504.



LASCASSAS, TN USGS Map
LAT 35° 53' 00"
LON 86° 21' 00"

Taken from: U.S.G.S.
7.5 Minute Series (Topographic)
Lascassas / Dillton Quadrangles
1956, Photorevised 1975

File No. 2005-02625
Public Notice 06-01
Kroger Company
Exhibit A

Figure 1
Site Location Map

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

FILE NAME: G: \Enviro\Active\744\744-02 Fig 1 Site Location Map.dwg

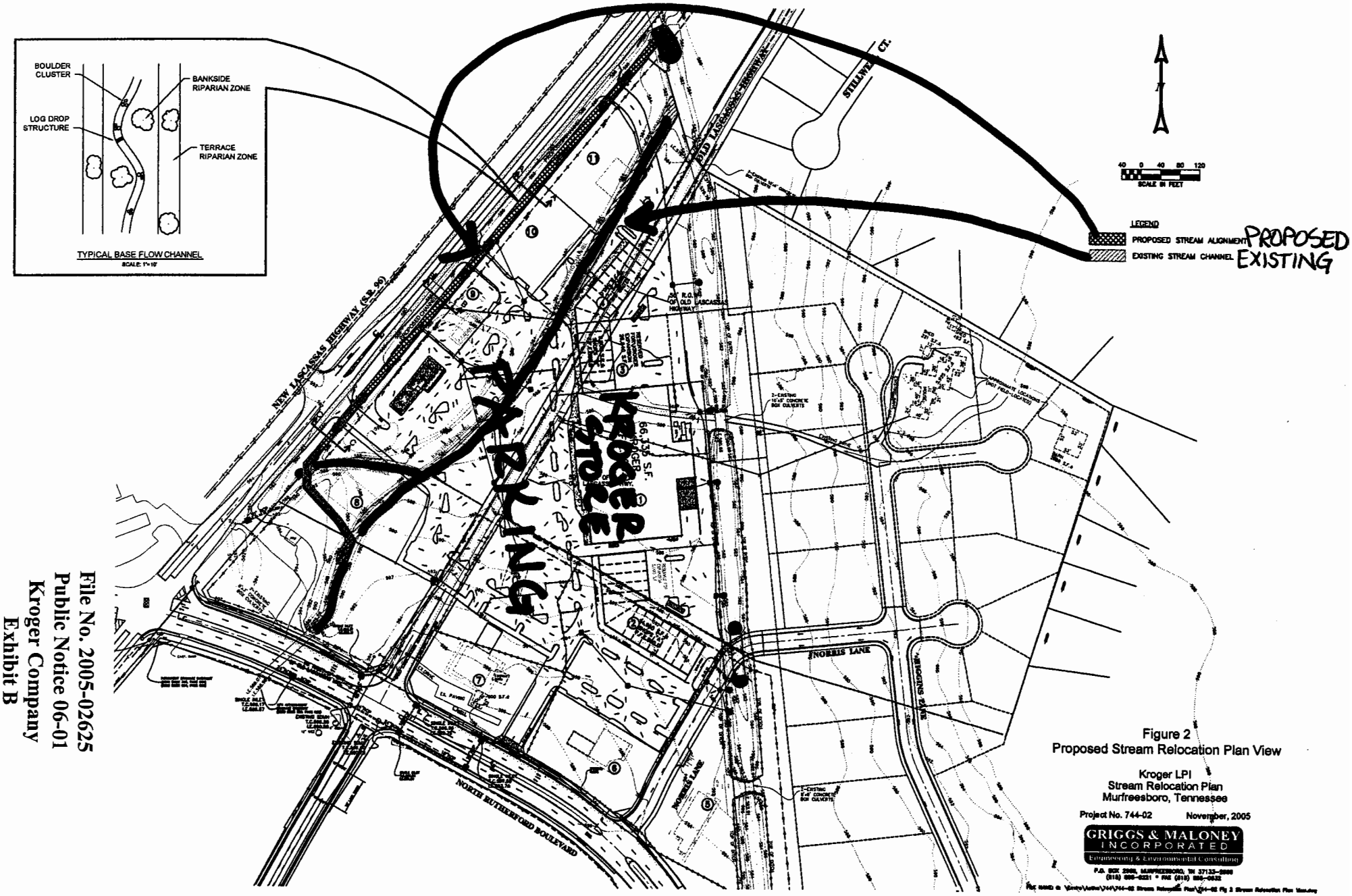


Figure 2
Proposed Stream Relocation Plan View

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

GRIGGS & MALONEY
INCORPORATED
Engineering & Environmental Consulting

P.O. BOX 2555, MURFREESBORO, TN 37133-2555
(615) 890-6221 • FAX (615) 895-0632

File No. 2005-02625
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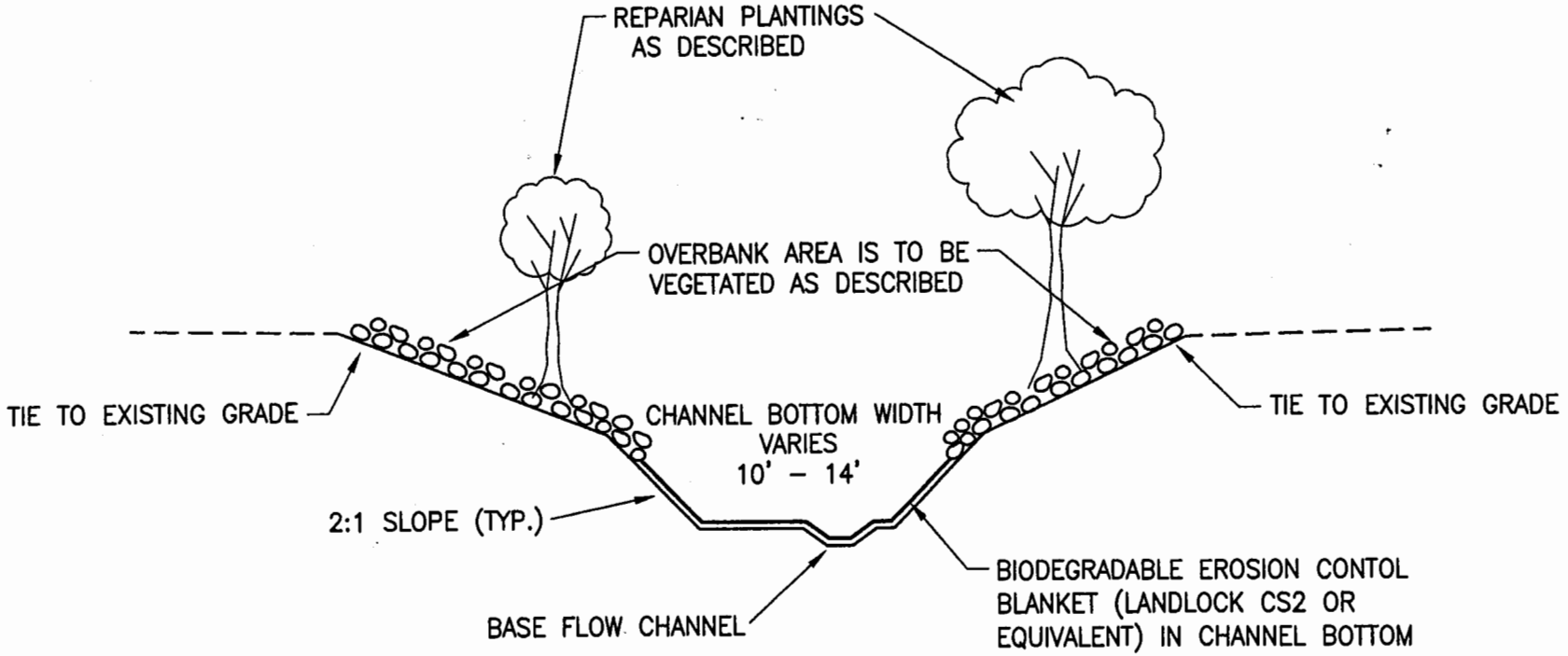
Exhibit B



TYPICAL SECTION LOOKING UPSTREAM
NOT TO SCALE

File No. 2005-02625
Public Notice 06-01
Kroger Company
Exhibit C

Figure 3
Typical Stream Section

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

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FILE NAME: G: \Enviro\Active\744\744-02 Stream Relocation Plan\744-02 Fig 3 Typical Section.dwg

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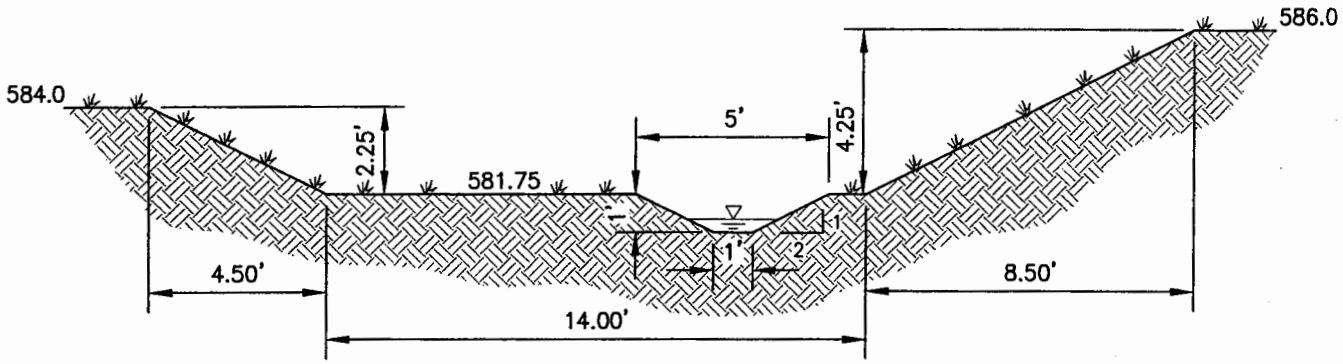
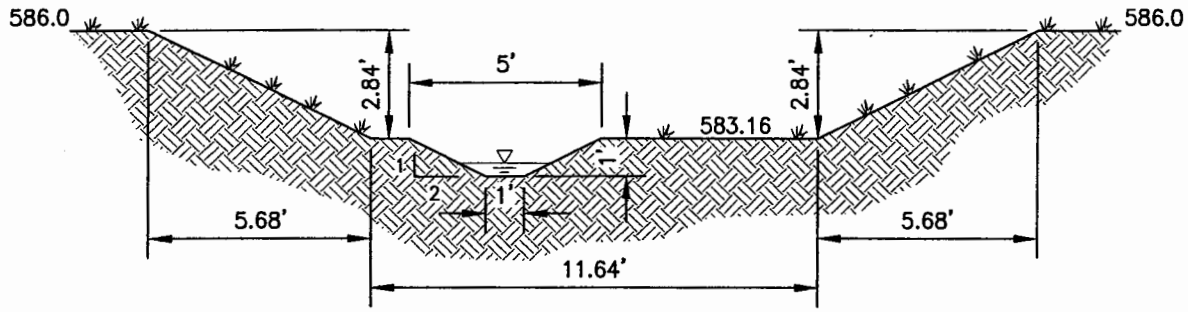
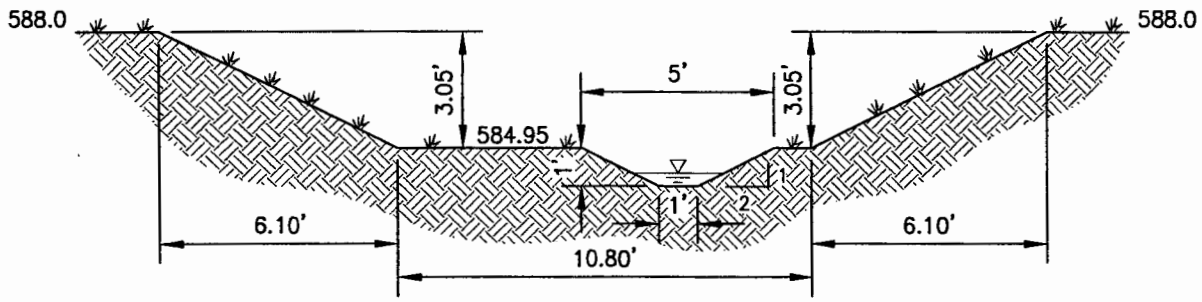
Exhibit D



SECTION A–A
SCALE: 1"=5'



SECTION B–B
SCALE: 1"=5'



SECTION C–C
SCALE: 1"=5'

Figure 4
Proposed Channel Cross-Sections

Unnamed Tributary to Bushman Creek
Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

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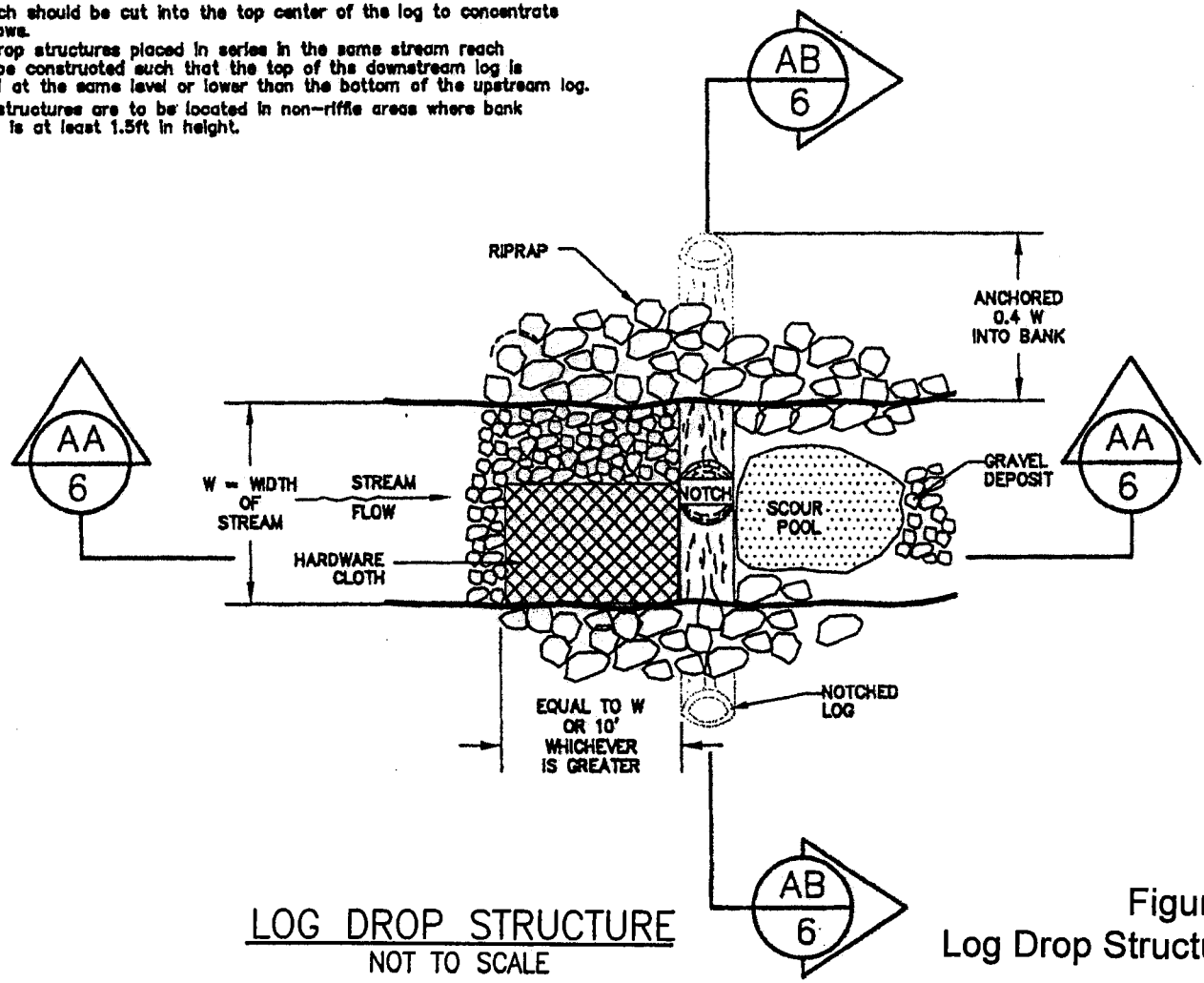
FILE NAME: G: \Enviro\Active\744\744-02 Fig 4 Channel X Sections Rev 11-21-05.dwg

Notes:

1. If possible, sycamore or other rot resistant log, min. (1ft.) in diameter, should be used for construction.
2. The logs should be anchored at least 0.4 x stream width into the streambank. If the width is less than 8ft., each log should be anchored 3.3–5ft. into the bank.
3. The ends shall be backfilled with rock and excavated material. The backfill must be armored with appropriately sized rock to prevent erosion.
4. Hardware mesh should be attached to the upstream part of the log and extended upstream a minimum of 10 feet. The cloth should be buried at least 1ft. into the streambed.
5. A notch should be cut into the top center of the log to concentrate low flows.
6. Log drop structures placed in series in the same stream reach shall be constructed such that the top of the downstream log is placed at the same level or lower than the bottom of the upstream log.
7. Drop structures are to be located in non–riffle areas where bank height is at least 1.5ft in height.



LOG DROP STRUCTURE
NOT TO SCALE

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Exhibit E

Figure 5
Log Drop Structure - Plan View

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

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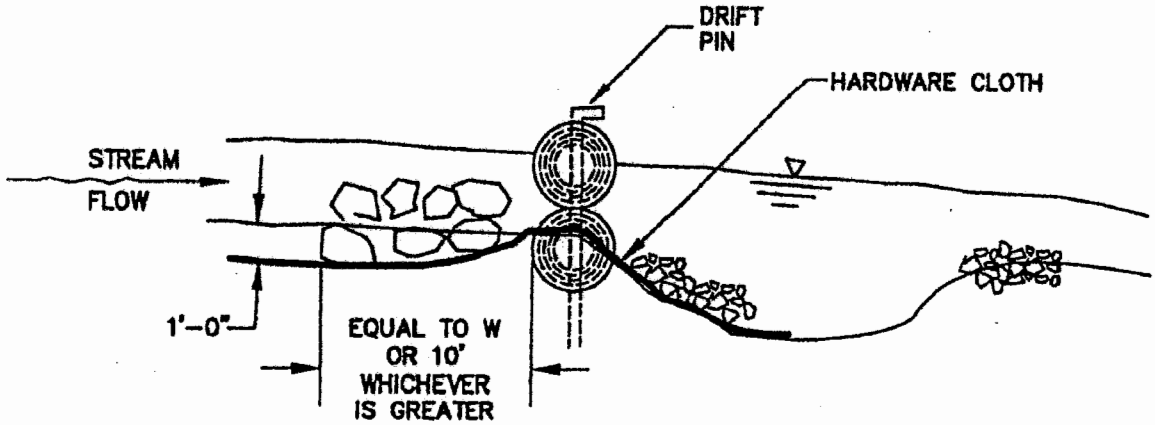
FILE NAME: G: \Enviro\Active\744\744–02 Stream Relocation\744–02 Fig 5 Log Drop Plan View.dwg



TYPICAL SECTION
NOT TO SCALE

File No. 2005-02625
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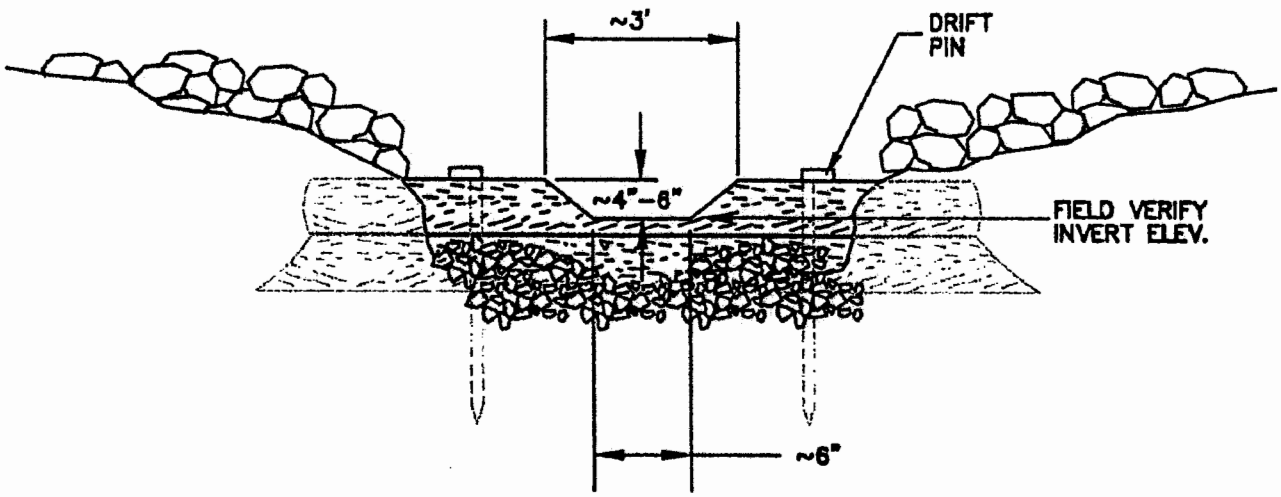
Kroger Company
Exhibit F



TYPICAL SECTION
NOT TO SCALE

Figure 6
Log Drop Structure - Typical Section

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

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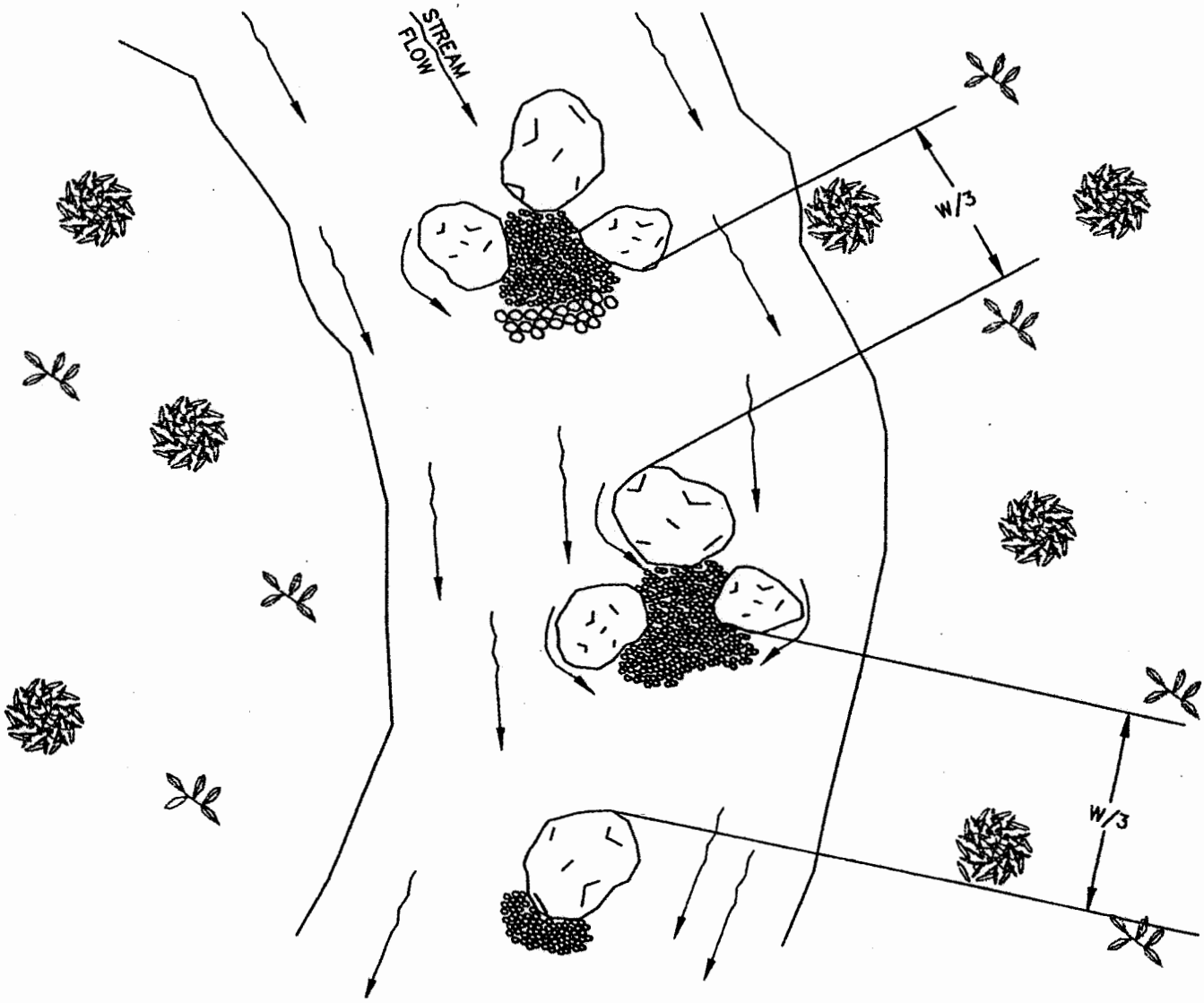
FILE NAME: G: \Enviro\Active\744\744-02 Stream Relocation Plan\744-02 Fig 6 Drop Log.dwg

Notes:

1. Clusters are comprised of 3–5 boulders.
2. The clusters shall be triangular and placed in the downstream half of a long riffle or glide.
3. Boulders should not be placed in pools.
4. Clusters placed in the same stream section should be at least 1/3 of the stream width apart.
5. Clusters may be placed in deeper areas to cause undercutting and increase cover. (at the direction of the Field Engineer or his Representative) Height of boulders shall be twice the depth of water at normal flow (To be field verified).
7. Boulders shall be heavy enough to resist movement by rapid streamflows.



BOULDER CLUSTER
NOT TO SCALE

Figure 7
Boulder Cluster Schematic

File No. 2005-02625
Public Notice 06-01
Kroger Company
Exhibit G

Kroger LPI
Stream Relocation Plan
Murfreesboro, Tennessee

Project No. 744-02 November, 2005

FILE NAME: G: \Enviro\Active\744\744–02 Stream Relocation Plan\744–02 Fig 7 Boulder Cluster.dwg